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• ON CHLOROFORM INHALATION DURING LABOR; WITH ESPECIAL
REFERENCE TO THE PAPER BY DR. JOHNS, OF DUBLIN,
LATELY ADMITTED INTO THIS JOURNAL.

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[Communicated for the Boston Medical and Surgical Journal.]

It must have occurred to many besides the writer that the editors of the *Dublin Quarterly Journal*, by admitting Dr. Johns' article on Chloroform Inhalation into their pages for May last, had done much to impede the progress of practical midwifery. They were perhaps compelled to it by the fact that as one of their former contributors and a practitioner of good local reputation, the publication of his paper was due to Dr. Johns as an act of courtesy—certainly for no other reason.

However this may be, it is very much to be regretted that our own JOURNAL should have reprinted, without comment, what after all and though unintentionally on the part of its author, is but an offence against truth, against science and against common sense, which it is the duty of every obstetricist to brand. This opinion will be shared by all whose actual experience of the merits of the question can alone entitle them to judge. The republication is the more to be regretted, occurring at this time of all others, when in the very same issue of the JOURNAL the Editors were lamenting its alleged feeble support, since it might be taken by outside parties as so far justification of this assumption. It is possible that with every one who has not carefully perused the article in question, the Editors may have been misled by its title, which would give a very erroneous impression of the author's real aim.

In the first place, Dr. Johns has made an attack, however concealed his approaches, not upon chloroform inhalation alone, but upon that of ether as well; his paper being really a bitter tirade upon the whole employment of anæsthesia in childbirth. This assertion is proved by his own words to that effect; "Many have testified to the fact that uterine action has been lessened by *anæsthetics*," &c.

VOL. LXIX.—No. 3

"In the employment of *anæsthetic* agents during instrumental delivery, we deprive ourselves," &c.

"When *sulphuric ether* was first employed as an *anæsthetic* in this country, a medical student inhaled it as an experiment, and the smell was evident off his breath, to any one who spoke with him, for nearly a week after its employment." To what end was this bald statement introduced by Dr. Johns? Was it for the purpose of throwing discredit upon the whole matter by ridicule, of proving the author's unacquaintance with the effects of *anæsthetics* in ordinary employment, or by introducing a subject foreign to that in hand—as is also his page or more concerning the deleterious effects of *ergot*—to prop by mere and empty words a desperate cause?

Dr. Johns continues: "We very frequently see better and safer recoveries after tedious and painful *than after rapid and painless labors*, and the latter are not the less likely to be seriously complicated; indeed, in former days, happy for the parturient female, such an opinion was entertained." Turn back, if he can, the wheel of time.

In the next place, he has made no assertion concerning the effect of chloroform in midwifery, that has not been charged over and over again, by some person or another, against ether, not even excepting that of actually fatal result; and this we do not hesitate to affirm has never yet occurred where chloroform was properly administered, under proper circumstances, in childbed.

Again, we are gravely assured that upon *anæsthetics* are dependent certain complications that have been common since the first confinement of the first mother, nay that even the profession are now accustomed to treat and to cure by *anæsthetics* themselves. Our author throughout writes as though the controversy were still in its infancy, with all its early crudities and absurdities of apprehension, and as though these were still worthy a moment's serious thought. Has he been sleeping these long years—*anæsthetized*, perhaps?

Dr. Johns calmly relates, in the evident belief that they are to the point of his argument, cases of gross malpractice, as though such were in any way or ever to be allowed weight in the solution of a scientific problem. I quote again: "The os was so located as only to be found by the well-educated and practised finger. The medical attendant, having failed to discover the real state of matters," proceeded to apply his instruments upon the uterus itself. In another case, also, the perforator, so constantly used in Dublin, was "pushed into the cervix expanded over the foetal head," and in a third "the medical man mistook the attenuated anterior section of the cervix for the membranes, and endeavored to perforate them with his nail." In these instances, fortunately for *anæsthesia*, it had *not* been resorted to; and therefore, as having no connection with our subject, Dr. Johns should never have introduced them, serving, as

they can possibly do, no purpose save to bring discredit upon the profession. He may well admit that had chloroform been "resorted to in either, it must be evident to all, even to the most skeptical, that the consequences would have been most disastrous." Are obstetric cases to be thus entrusted to any whose touch is *not* well educated and practised? Are results from other hands than these, or the dicta of persons confessedly incompetent for their duties, to be allowed place in our scales?

And finally, Dr. Johns has collected, from any and every source, however or not reliable, all sorts of unsubstantiated statements concerning the effects of anæsthesia, that have many of them been repeatedly disproved and rebutted; and these, thrown together without any method or logical sequence, he has arrayed as overwhelming and invincible. Such at first sight they may seem; flash upon them, however, the light of careful examination, prick them with the needle of even a moment's scrutiny, they equally collapse into so many instances of *non sequitur*, *post* rather than *propter hoc*, coincidence but not sequence. Every so-called fact that he has collected is a two-edged sword, very dangerous to the bearer unless more carefully handled than he has done. The accidents that he relies upon still frequently occur where anæsthetics are not employed; they occurred as frequently in former years, before anæsthesia was known.

What, then, can be said of an attempt to explain them all by chloroform? Well have such been stigmatized as "pieces of unscrupulous and disreputable professional gossip."

"One day," says Forbes, "we had death from asphyxia; another, from coma; another, from hæmoptysis; some from convulsions; a few from pneumonia; and one or two from actual incrimination or explosion, through the accidental firing of the vapor within the air-passages. We have not had time to investigate all these terrible cases, but we may state that we traced the one which seemed the best authenticated—that from hæmoptysis—from its full-blown majesty in after-dinner gossip to its humble source in the hospital. And this was the case: a day or two after a successful operation, the patient pricked the gums while picking the teeth with a pin; and it was the product of this operation, not of the anæsthetic, seen in the spitting-pot by the patient's bedside, that was bruited about town, as of itself sufficient to settle the question for all future time."*

We must not forget that, as with all powerful agencies in medicine, much depends upon the purity of anæsthetics, upon the times of their employment and its mode—that medical statistics, prepared with whatever care, are notoriously unreliable, and that their fallaciousness in any given case may be considered proved, when there is strong reason, as here, to believe that they have been selected for a

* British and Foreign Medico-Chirurgical Review, April, 1847, p. 564.

pre-determined purpose, and with little regard to the circumstances under which they may have originated.

And again; Dublin was predisposed at the outset against anæsthetics in midwifery, because it was in Edinburgh that Dr. Collins' statistics, here so relied upon by Dr. Johns, were carefully analyzed and the frightful preponderance of craniotomy in Irish practice convincingly shown. London shared the prejudice, partly from the rivalry existing between its schools and that beyond the Tweed, and partly from the influence of a renegade Scotchman, an unsuccessful candidate for the midwifery chair of Edinburgh, whose spleen thus vented itself, as in many similar ways before and since. Dr. Johns' paper is merely a studied collection of all that these circumstances brought forth. The lapse of time has greatly softened the feelings of their several authors; an occasional flash, however, like the publication of this very paper, shows that the old animosities are not entirely extinguished.

Dr. Johns makes one very apposite quotation from Denham, the more valuable as perhaps explaining the strange results he professes to have got from the use of chloroform in midwifery:—"That chloroform may be, and sometimes is, given for the purpose of amusing patients, and making them believe that they are saved from a vast amount of pain, when in reality they have scarcely inhaled a single breath of it, I doubt not."

What can be said in sufficient condemnation of such treachery to our suffering and confiding patients, such refinement of cruelty, such desecration of the physician's priceless privilege, as is here implied? Of what possible worth can be the specious data, the false statistics furnished by men who practise such base artifices as these, or who admit that they are ever resorted to by those whom they may have quoted as authority? Dr. Johns, in his zeal, has here fairly over-shot his mark; let the weapon recoil.

To return; I do not intend to enter upon an examination of the many weak points of the article in question, but the assertion so broadly made by Dr. Johns, that the use of anæsthesia to mitigate and shorten the pangs of labor is only a backward step in our efforts to lessen child-bed dangers and mortality, is little less than an insult to the profession. I should have alluded to it in my paper upon the employment of anæsthetics in Obstetric Surgery and Medicine, read at the annual meeting of the Massachusetts Medical Society at Pittsfield, in June last, had not Dr. Johns' statements seemed so obviously unfair, so stale and utterly without foundation, as not to merit the slightest acknowledgment among scientific or practical men.

Having incidentally referred to my own position in this matter, I will merely add that I claim that all the host of trivial arguments like those of Dr. Johns, and others of far more weight, have been fully answered; that I consider the induction of anæsthesia during

labor not a matter of expediency or necessity alone, but a sacred duty, which, were we women, we should soon recognize; and that while I am willing to admit the overwhelming advantages of ether over chloroform for general surgical practice, I claim for this last the entire and sole control of child-bed. My reasons for these opinions I have unhesitatingly and I trust convincingly set forth in the paper to which I have referred. I do not care to anticipate their publication by repeating them here, and have just at present a very different matter on hand; to wit, the exposure of Dr. Johns' unfitness to enter the most extensive, most interesting and most important medical controversy of the age, whose participants are not to be diverted from their earnest work by grotesque mask of ridicule, or put to flight by bladder-strokes, however loudly sounding or plied with whatever force. Such as are Dr. Johns' arguments, however, what else can they be styled, unless as dust to be thrown into the eyes of the unwary? If armed with no better weapons, he cannot rest his claim to our attention upon the plea of *audi alteram partem*, for he represents neither, merely the crowd outside the ring; spectators it is true, but bound by every rule of honorable warfare to keep aloof from the contest.

Does this language seem uncalled for? Look, then, at its cause.

1. Obstetrics, the most noble of all departments of medicine, because resting, above all others, upon the honor of its practitioners, and above all others affecting the possibility of an incalculable increase of human life, by increasing the number of living births;

2. An attempt, made with very reasonable hope of success, to ensure that increase by shortening the average duration of labor—upon which, we are compelled to acknowledge, the present mortality mainly depends;

3. An opportunity at the same time, through this best gift of God to our profession—and I speak it with all reverence, for none of us males can possibly appreciate its full value—to mitigate the bitterest of human suffering; "What," says Meigs, "do you call the pains of parturition? There is no name for them but AGONY";

4. The fact that such attempt and such opportunity, whenever and wherever honestly made and properly appreciated, have been realized;

5. The position of the mass of the profession at the present time, in this country as well as abroad—prepared, now that the earlier heats of the controversy were past, soberly and sincerely to test the matter for themselves;

6. And now, the casting into our midst this bomb-shell of Dr. Johns, charged with gratuitous assumptions, slurs and manifest untruths; to light anew our prejudices, wound our personal feelings, and destroy our faith in all that the labor of years has been accomplishing.

If, however, this must be; if, as in the case of our Southern re-

bellion, reform can be had but by contest, the prejudice and apathy of a former age removed but by forcible attrition, and relief to the unnecessary pangs and peril to which ancient superstition has condemned our own flesh and blood, afforded but by the power of an enlightened outside public sentiment—let such then be accepted by those who recognize the weight of their mission. To have hastened the coming of its inevitable result will be sufficient reward.

The obstetricist, best of all, is able to feel the beat of the public pulse upon this question, and that also of his own profession. From close and pretty constant study of the matter, I am but confirmed in my opinion of nine years ago:

“But yesterday, and the man who dared give ether or chloroform in labor was considered as breaking alike the laws of Nature and of God; the time is close at hand when such will be said of all who withhold them, even in natural labor.”*

Hotel Pelham, 10th August, 1863.

CHOLESTERINE AND SEROLINE AS SECRETIONS.

[FROM an interesting paper on Cholesterine and Seroline as Secretions, contributed to the *American Journal of the Medical Sciences* for April, by Dr. J. H. Salisbury, we copy the concluding pages, as follows.—Eds.]

The following is a brief summary of the facts indicated by the preceding experiments:—

1. Cholesterine occurs largely in the ova of the human subject and of animals.

2. In the seminal fluid of the human subject, seroline and cholesterine are largely present, the former more so than the latter.

3. Cholesterine occurs very largely as a secretion in the saliva. No seroline is found.

4. Neither seroline nor cholesterine occurs in healthy urine.

5. Cholesterine occurs quite largely, and seroline in small quantity in jaundice-urine. (These bodies are probably always secreted by the kidneys whenever the liver, through organic or functional derangements, is unable to secrete them from the blood.)

6. Cholesterine or colorless blood-disks are secreted or effused from highly congested and inflamed mucous surfaces.

7. Cholesterine is secreted or effused from the peritoneal (serous) membrane in ascites.

8. Cholesterine occurs largely in the fluid of spina bifida tumors.

9. Cholesterine is secreted by the tear glands.

10. Human milk, previous to birth, is rich in cholesterine. No seroline detected in the experiment made.

* Preface to Simpson's *Obstetric Works*, p. xvi.

11. After the birth of the child, and during nursing, the mammary glands secrete largely cholesterine and seroline.

12. The milk of the cow is rich in cholesterine and seroline.

13. Butter, beef, and hog suet contain cholesterine and seroline.

14. The primary forms of the crystals of cholesterine appear to be the cube and rhombic prism; and that of seroline, the very acute rhombic or rhomboidal prism; though usually appearing as simply acicular.

15. Cholesterine and seroline are largely secreted from the blood by the sudorific glands during the sweating stage of intermittent fever. These glands become important blood depurative organs in this disease.

16. The kidneys largely secrete cholesterine in intermittent fever.

17. The kidneys secrete cholesterine in varicella.

18. The kidneys secrete cholesterine in diphtheritic conditions.

19. The kidneys largely secrete cholesterine in the disease known as *diabetes mellitus*.

20. The kidneys secrete cholesterine and seroline in remittent fever.

21. The kidneys largely secrete cholesterine in typhoid fever.

22. Cholesterine is secreted by the sudorific glands in health.

Concluding Remarks.—Cholesterine appears to be essentially a body, secreted from the blood by the glands concerned in digestion; the sudorific glands; those secreting tears and milk; and by the testis of the male and ovary of the female, and by the kidneys in hepatic disease. In the secretions of the testis (seminal fluid), seroline occurs more largely than cholesterine. In the female ova, cholesterine occurs largely, and no doubt has some office to perform in furnishing one important constituent of nourishment in the early fœtal development; before, in viviparous animals, there are any uterine attachments; and in oviparous, before they escape from the ovarian envelopes. Mucous and serous surfaces do not appear to have any power to separate cholesterine from the blood; unless, perhaps, when under the influence of congestion and inflammation.

As cholesterine occurs so largely in the bile and saliva, two secretions important in digestion, in the female ova, and in the mother's milk upon which the young feed, is it not highly probable that it has some important function to perform in digestion, at all ages; and as nourishment and a soporific in infancy, it only becoming excrementitious proper when this office is ended, and it is changed into seroline (stercorine of Dr. Flint)?

It is believed to be pretty well established, that the true source of cholesterine is the nervous system, of which it is an effete product. From the nervous system it passes to the blood, and is removed from the blood by the liver.

These experiments go to show that the liver is not the only organ

which separates this body from the blood. The salivary, tear, mammary and sudorific glands; and the testis and the ovary come in, each in its peculiar time and place, as important aids. They also show that a portion of the cholesterine of the human body may be taken into it through the food eaten, consisting of milk and butter, eggs, beef, and hog fat, and as there are more or less blood and serous matter in meat, be taken in in that substance also. Still, these facts do not argue against the nervous system being its true original source. They only show that it is formed in the nervous system of animals as well as in that of the human subject; and that in feeding upon animal food, the vascular system may gather this substance from two sources, the nervous system and the food eaten. The nervous system being the source of cholesterine, and the tear glands secreting this body, may explain why the profuse shedding of tears, in health, for any great length of time, so enervates both physically and mentally.

All functional and organic derangements of the liver produce despondency. The dark side of the picture is the one ever prominent. Actions and remarks are perverted, and everything goes wrong. There is a tendency for this condition to relieve itself, especially in the female sex, by a profuse flow of tears. May not this peculiar mental and moral condition, full of sad forebodings, be but a part of that beautiful sympathy of action between different organs of the body, wisely designed, in this instance, to stimulate the tear glands to excited action, in order that they may perform, to some extent, the depurative office of a liver, and thus relieve, partially, a vascular system surcharged with cholesterine?

That weeping relieves sad and despondent conditions is so true that you everywhere find it proverbial; it is well known that sudden grief does much towards deranging the functions of the liver. The tear glands, through sympathy, appear to come in as little safety-valves to the vascular system on such occasions, as well as on others hereafter mentioned, where the liver is deranged in its functions.

In climates where there is a disposition to "biliousness" ("bilious climates"), there is a tendency to inaction of body and mind; a heavy lethargic feeling prevails; a greater tendency to lounge about lazily and to sleep than in less "bilious" localities; the intellect is inactive and heavy; there is also a tendency to the greater deposition of adeps—a tendency to obesity.

In all diseased conditions of the liver where its normal functions are impaired, there is great dullness and lethargy, with a feeling of melancholy sadness and a disposition often to doze and sleep.

Children while nursing sleep a great portion of the time; they fall asleep while feeding: there is also a remarkable tendency to take on fat. After being weaned they are much more wakeful, and the fatty deposits usually decrease.

The free use of cows' milk as food produces heaviness and a ten-

dency to sleep. The use of eggs largely as food produces a similar lethargic condition.

May we not account for the lethargic influence and the tendency to sleep and obesity of "bilious climates," on the ground of the blood and nervous system becoming and remaining constantly surcharged with cholesterine? In diseased conditions of the liver, when its depurative functions are impaired, we know the blood and nervous system become surcharged with this body, and we know that this surcharged condition produces results similar to those of "bilious climates."

May not the cholesterine and seroline in the food of nursing infants be one cause of their disposition to sleep and to become fat?

May not these bodies also, in milk and eggs, be the cause of their producing heaviness and sleep? When using milk and eggs as food, the liver has to perform the double office of removing the cholesterine formed by the nervous system and that taken into the blood by the food eaten. The result is that the blood and nervous system become surcharged with this body, and we have temporarily the same condition of the system that occurs in "bilious climates." The liver being more or less deranged in its functions in intermittent fever, the sudorific glands come in as blood depurative aids in freeing the vascular system of cholesterine and seroline and other effete matters. This may explain, to some extent, the advantage derived from the free use of diaphoretics as aids in the successful treatment and eradication of this disease.

The secretion of cholesterine from the blood by the kidneys, in intermittent fever, may explain why it is that the free use of diuretics (acetate of potash, &c.) are so beneficial often in its treatment. Without the free use of diaphoretics and diuretics in the treatment of intermittent fever, the disease is seldom so perfectly eradicated from the system as to prevent its re-appearance the following spring; while with their proper use, the disease seldom reappears, unless the system is again exposed for some length of time to the exciting cause.

The discovery of the fact that the kidneys secrete cholesterine largely in diabetes mellitus may throw some light upon the pathology and therapeutics of this peculiar disease.

Ready process for detecting the presence of cholesterine and seroline.—As the ordinary process for determining the presence of cholesterine and seroline is too lengthy and often beyond the facilities of the practising physician, I here give a simple method, which may answer as a very good approximate means (till a better is suggested) for detecting these bodies in urine and other secretions, and which may often be used with advantage by physicians in their practice as a diagnostic aid. Care should be taken, in the microscopic examination of crystals obtained from the secretions by this process, to not confound those of cholesterine with those of lithic acid and

chloride of sodium. As the secretion of these bodies by the kidneys is an abnormal function, one which they only perform when the liver, whose normal office is to secrete these bodies, is deranged, their presence in the urine will usually indicate hepatic derangement.

Place two to four ounces of urine in a six-ounce bottle, and add one ounce of pure ether; tightly cork, and agitate by turning quickly the bottle on different ends, allowing the ether to pass backwards and forwards through the urine, so as to wash it completely—two to five minutes' stirring are usually sufficient—then allow the ether to rise to the surface, and decant into a clean porcelain or glass dish and evaporate carefully to about ten drops, which place between glass slides and set aside for several hours to crystallize. When this is completed, a microscopic examination with a moderate power will detect the cholesterine plates and acicular crystals of seroline, if present.

PERSULPHATE OF IRON IN CAMP DIARRHŒA.

By O. C. GIBBS, M.D., FREWSBURG, N. Y., LATE SURGEON 21st REG'T N. Y. S. V.

In the *Lancet and Observer* for October last, in the Commercial Hospital reports, there are several cases of diarrhœa reported, in which Dr. John Davis used the persulphate of iron, with very prompt and satisfactory results. That article did not meet my eye until quite recently.

When in the army service, I found diarrhœa to be the almost universal disease in the army, especially while in active duty in the field. Bad water, change of water, impure coffee, changeable weather, exposures, undue fatigue—each had the credit of producing it, and it certainly was very intractable, protracted and recurrent. I soon became convinced that to no one of these causes, nor to all combined, was the disease principally due. I have seen it as severe and as wide-spread when the army was stationary, in good quarters, the weather fine and unchangeable, and the water used of the purest character, bubbling pure and cool from the finest springs in the world. I soon became convinced the disease had its origin in a lack of a suitable amount of vegetable food! When potatoes, onions, cabbages, &c., were articles unknown in the army, for months in succession, the purest water, the healthiest climate, and the best sanitary regulations, would not serve to prevent camp diarrhœa, of a severe and intractable character. "Hard tack," salt pork, and poor beef, when long continued, do not furnish all the elements of a healthy nutrition, and debility and relaxation of all the tissues result.

Be the cause what it may, every army surgeon knows that diarrhœa is the bane of our army, and his especial annoyance. As an astringent and tonic, I soon commenced using the persulphate of iron, with

opium; and though without known authority, I had every reason to be pleased with the result. At first the remedy was used in one-grain doses, but those were soon increased to two and three, and, in some cases, as high as five-grain doses. I never saw harm result from its use. When the disease was checked, one or two doses a day, for one, two, or three weeks, was always advisable, to prevent recurrence.

One word in regard to opiates. When I went to the army, I was told opiates were not well borne. Observation soon convinced me they were simply inoperative, from insufficiency of the doses. I at once gave the remedy in two and three-grain doses, and, in some cases, even still more liberal doses. So beneficial did these doses prove, and so unaccompanied with unpleasant symptoms, that when a heavy day's march was before us, soldiers who were, or had recently been, afflicted with diarrhœa, would come to me before setting out, and ask to be supplied with two or three of these three-grain pills of opium. Such were very seldom compelled to give out because of their diarrhœa. So promptly efficient was the persulphate of iron, with full doses of opium, that scarce a day passed that some member of our regiment did not bring to me one or more long-suffering ones, from some other regiment, to whom he had confidently promised *his* surgeon would afford relief.—*Cincinnati Lancet and Observer*.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JULY 13th.—*Large Abscess between the Bladder and Uterus*.—Dr. PUTNAM reported the case, which he had seen in consultation with Dr. C. D. Cleaveland.

The patient was a slender woman, aged 37, dark hair and eyes; active, but not strong; married seven years; menstruation always regular. During the winter of 1861 had unusually good health. In March, 1861, her husband was sick, and she nursed him assiduously for eight weeks. Menstruation at this period ceased on the second or third day. Immediately afterwards, she noticed a tumor in the abdomen. It appeared quite suddenly—"puffing right up," as she expressed it. It was not preceded by local uneasiness, except occasional slight pain in the back and hips, nor by any constitutional disturbance, except casual sensation of coldness. On the 25th of April, when Dr. P. saw her, the tumor was globular, about the size of a small foetal head, and in the centre of the abdomen, and slightly elastic. No positive hardness or resistance, except over a space of an inch or two towards the left iliac region. No tenderness on pressure.

A soft tumor occupied the upper part of the vagina. No neck or os uteri could be detected, but on the sacral surface of the tumor was a semilunar slit or valve, through which a sound could be passed for

an inch and a half. She did not look sick. Appetite good. Pulse 90, rather small. Skin cool.

July 13th.—Has had pain in sides and back; considerable dysuria and constipation. Has lost flesh and strength, though she has been up and dressed, and even walked out of doors. The tumor was more prominent and globular—about six inches in diameter. An opening was made by a scalpel, and about eight ounces of thick, yellow, inodorous pus discharged through vagina.

Aug. 29th.—Abdominal tumor as prominent as before the discharge of pus—like a foot-ball above pubes. Opened by scalpel per vaginam, and four quarts of pus discharged of rather disagreeable odor. After the escape of the pus, the parietes of the abscess closed down so as nearly to efface the cavity, the internal surface feeling rough and irregular when the finger was passed into the abscess. From this period constant discharges of pus continued till death, which occurred in November, 1862, about twenty months from the first appearance of the abscess. Menstruation regular nearly the whole time.

On dissection, a very defined and regular abscess was found between the bladder and uterus, which, though empty, was capable of holding from one to two pints. Parietes dense. Inner surface quite dark and knobbed, but not rough as from ulceration; looking as if an adventitious mucous membrane were forming. The uterus was considerably elongated by the growth of the abscess, and opened freely at the semilunar slit above referred to; in front of which last, and upon the surface of the vagina, was an opening through into the abscess, about large enough to admit a common-sized probe. The specimen is in the Cabinet of the Medical College.

JULY 13th.—*Cancer of the Stomach, with Empyema and old Peritonitis.*—Dr. MINOT showed the stomach and part of the intestines of a man, 50 years old, who died in the Hospital. The patient was always of a dyspeptic and costive habit, and for the past two years had distress after eating and sour eructations. Eight months ago he began to vomit, and lost flesh and strength steadily ever since. He had no acute pain, except a stitch in the cardiac region, when the stomach was distended, which was relieved at once by vomiting. Latterly, he had avoided vomiting by great care in diet, taking milk, eggs, &c., in very small quantities.

On his entrance to the Hospital, June 27th, he was excessively emaciated and feeble, and was confined to his bed. A hardened mass, having a semi-circular outline, was felt issuing from the middle of the left hypochondrium, passing two inches above the umbilicus, to near the junction of the cartilages on the right side. It was somewhat tender on pressure. Percussion gave a perfectly flat sound over the left chest, before and behind, and there was entire absence of respiration. The breathing was perfectly quiet. There was a slight expectoration of mucus, without cough.

He had, towards the last, some trouble from eructations, and some difficulty in expectorating, but he did not vomit while in the Hospital. He died easily, July 11th. He was treated by extract of conium, in doses of two grains, three times daily. On entrance, he was under the care of Dr. Gould, and afterwards came under that of Dr. Minot.

The stomach adhered closely to the liver, spleen, and adjacent portions of intestines. It was much contracted, and its walls thickened

in the last two or three inches of the pyloric portion, where the muscular coat was hypertrophied and striated. The subperitoneal cellular tissue here was thick, firm and of a whitish color. A short distance within the pylorus was a marked depression and ulceration, upwards of an inch in diameter.

All parts of the contiguous surfaces of the peritoneum were united by old adhesions, and projecting from the surface were many round, whitish nodules, from one eighth to half an inch in diameter, laminated in appearance on section, and containing, in some instances, a brownish, cretaceous mass. On microscopic examination, they appeared to consist of round, oblong or somewhat distorted cells, with very large nuclei and very distinct nucleoli.

The left pleural cavity contained five pints of thick pus, enclosed in several distinct sacs. The pleural surfaces were covered with a yellow, caseous deposit, and were puckered and reticulated between the ribs. The left lung was so much compressed that it did not crepitate, but was otherwise normal. The right lung did not collapse readily, but crepitated throughout. There were no tubercles in either lung.

The other organs were healthy.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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CHOLERA INFANTUM.—The large number of deaths which have taken place in this city during the past three weeks must have attracted the notice of all who have examined the tables of mortality. So large a number has not occurred before, we believe, since the epidemic of cholera in 1849. During the week ending August 8th, the whole number amounted to 186, while the average mortality of corresponding weeks for the last ten years, corrected to the increased population, was only 119. A continued succession of days and nights intensely hot generally exercises a sudden and fatal influence upon many whose powers of endurance have been exhausted by chronic disease, and who under ordinary atmospheric conditions might have recovered or at least lived somewhat longer. The very large preponderance of male deaths, too, indicates that the rays of the sun must have produced a directly fatal effect upon some of those who labor beneath them; but a leap from 87 deaths per week to 186 in an interval of only fourteen days, must be explained by the action of some more than ordinary morbid agency. Its influence has been most marked among those least capable of resisting it, and we find, accordingly, that it is the destruction of young children to which the remarkable rise in the mortality of the city is chiefly due. During the last three weeks ending August 15th, the deaths of persons under 5 years of age were respectively 73, 85 and 87, and of these the majority were chiefly infants under 18 months. Through the kindness of our worthy City Registrar, Mr. Apollonio, who is always desirous of making his facts and figures useful to the medical profession, we have been able to examine the statistics relating to the frightful endemic of cholera infantum now prevail-

VOL. LXIX.—No. 3 A

ing, by which 147 children have perished between July 15th and August 15th within the city limits. We were surprised to notice the extreme youth of the majority of these little victims, and we subjoin a table representing their ages in 90 cases.

Aged 1 month -	5	Aged 12 months -	6
" 2 months -	10	" 13 " -	6
" 3 " -	5	" 14 " -	1
" 4 " -	6	" 15 " -	3
" 5 " -	4	" 16 " -	2
" 6 " -	11	" 17 " -	5
" 7 " -	4	" 18 " -	4
" 8 " -	2	" 24 " -	1
" 9 " -	3		
" 10 " -	5	Total -	90
" 11 " -	7		

We see, therefore, that 41 of the deaths occurred in children not more than six months old, and that 68 were within their first year. We are satisfied that this is in great part due to the custom so prevalent among poor and ignorant mothers of feeding their babes in part with other food than their own milk, even from the earliest age, and long before their stomachs are fitted to digest the matters forced into them. The milk which has been sold in the localities where the greatest mortality has prevailed, has been of the worst description during the last few weeks, consisting, in several instances in which we have examined it, of 50 per cent. added water, with a large admixture of burnt sugar, molasses and salt. Such a compound undergoes decomposition within a very short time after removal from the dealer's ice-chest, and can but derange a healthy stomach; its effect upon those to whom it is given as nourishment in this affection, may be imagined.

The duration of the disease, in the 34 out of the 90 cases in which this particular was given, was as follows:—12 hours 1, 1 day 4, 2 days 5, 3 days 6, 4 days 7, 5 days 1, 7 days 5, 8 days 2, 9 days 1, 14 days 1, 21 days 1. This, if we mistake not, indicates a rapidity of progress somewhat exceptional in this disease, for it will be observed that 67 per cent. of the cases terminated fatally within four days.

It is chiefly to the weather that we look for the bar to the continued spread of this disease, and the present cool breeze, fresh from the Atlantic, will, we trust, prove itself the much-desired reliever.

THE criticism of Dr. H. R. Storer on Dr. Johns' paper on chloroform as an anæsthetic in labor, calls for a word of comment from us. Dr. Storer seems to think the paper was published without a just impression of the nature of its contents. We wish to say, then, that we regarded it as a strong argument against the use of chloroform as an anæsthetic on any occasion. On a careful examination of it, we find the author quotes from no less than thirty-four members of the profession, some of them men of high authority in obstetric matters (witness such names as Montgomery and Ramsbotham), opinions and statements adverse to its use in labor.

The author also quotes numerous and important statistics. And although we know the maxim "figures cannot lie" is a fallacious one, yet they do often tell a most appalling truth. In the present instance we do not feel disposed to enter into a discussion of their value, but leave the proper appreciation of them to the thoughtful reader.

Next, it is evident that Dr. Johns, in attacking chloroform, attacks

the whole practice of the use of anæsthetics in labor. Now as this process is in Europe almost universally identified with the use of chloroform as the agent, we do not attach much importance to this charge, inasmuch as, with our present knowledge, the harder the blows dealt at that dangerous and fatal drug the better we like them. We do not consider the question of the propriety of the use of anæsthetics in natural labor as by any means definitely settled. We know there are many physicians who are very averse to their use, and we know that we have not been able to use that which is most commonly employed in America, sulphuric ether, in some cases in our own hands. Dr. Storer claims that chloroform is *the anæsthetic par excellence* for obstetric use, and we are told that he unfolded his views on this question in his paper read at the last annual meeting of the Massachusetts Medical Society. We look for its publication with much interest.

In quoting Dr. Johns on the subject of the comparative danger of tedious and rapid labors, by leaving out a portion of the paragraph Dr. Storer changes its meaning radically. We trust this omission was through inadvertence. Here are the two paragraphs:—

Dr. Johns says: "We very frequently see better and safer recoveries after tedious and painful than after rapid and painless labors, and the latter are not the less likely to be seriously complicated; indeed, in former days, when, happy for the parturient female, chloroform was unknown, and when meddlesome midwifery was strongly reprobated, such an opinion was entertained."

Dr. Storer quotes him as saying: "We very frequently see better and safer recoveries after tedious and painful than after rapid and painless labors, and the latter are not the less likely to be seriously complicated; indeed, in former days, happy for the parturient female, such an opinion was entertained."

It will be seen that the words "*happy for the parturient female*" refer to the period *when chloroform was unknown and meddlesome midwifery was strongly reprobated*, not to the prevalence of the opinion referred to. The words in italics are omitted by Dr. Storer. In quoting from another who is the subject of severe criticism, too great accuracy cannot be observed.

As for Dr. Storer's strictures upon and criticism of Dr. Johns, we leave them for the consideration of our readers without comment. From among the very numerous titles appended to his name over the article as it originally appeared in the *Dublin Quarterly*, we selected that which we thought would carry with it the most weight, and affixed it in our copy, including in a comprehensive &c. a number of honorable designations, which we did not think it necessary to print. We must be pardoned for thinking that a man in such a position cannot be justly regarded as a spectator "*outside the ring*," to borrow Dr. Storer's figure, who has no right to enter the arena, or express an opinion about the contest.

Our readers will be struck with the general tone of Dr. Storer's paper, reflecting as it does, even in the title, most severely upon the Editors of this JOURNAL. We do not care to enter into a personal discussion, but feel bound to say, that we are not yet convinced that Dr. Johns' paper is not worthy of the most careful consideration, and as such suitable for a place in our pages. We are not his champions, and there are undoubtedly portions of the paper open to just criticism:

he probably is able to defend himself. In the present state of our knowledge we regard it on the whole, as we said before, as having great weight as an argument against the use of chloroform as an anæsthetic.

THE CULTURE OF FISH.—At the Royal Institution on Friday, April 17th, Mr. Frank Buckland gave an admirable lecture "On the Artificial Incubation of Fish." The Duke of Northumberland presided. The speaker, who made no pretence to eloquence, did not fail to instruct and amuse a crowded audience by his clear, often humorous descriptions, enthusiastic manner, and plain, easy, unaffected diction. On the table in front of Mr. Buckland were shown a variety of boxes of different kinds, but all of the simplest forms, in which on a bed of clean gravel, and beneath a shallow stream of water, the eggs of trout, salmon, perch, &c., in various stages of development, were being hatched. He began by considering the eggs. Fish are the most productive of all living creatures. A good fowl will lay 120 eggs in a year; but he had found by experiment that a salmon or trout produces 1000 eggs to every pound of its weight. It follows that a salmon of from 15 to 30 pounds would contain from 15,000 to 30,000 eggs; a trout of 1 pound, 1008 eggs. A turbot of 8 pounds has been found to contain 385,200 eggs; a roach of $\frac{3}{4}$ pounds, 48,000; a mackerel of 1 pound, 86,220; a brill of 4 pounds, 239,755; a sole of 1 pound, 134,466; a perch of $\frac{1}{2}$ pound, 20,592; a herring, 19,840; a Jack of $4\frac{1}{2}$ pounds, 42,840; and a cod of 15 pounds, the enormous number of 4,872,000 eggs. And yet we have to pay from half a guinea to a guinea for a turbot. Any one would think that with this fecundity we have only to let them alone, and fish would cultivate themselves; but this is not the case. We find that only one in every thousand of trout becomes a fish. A fish at the time of spawning seeks out a convenient place in which to deposit her eggs, and covers them over with earth or gravel. Will these 15,000 or 30,000 eggs then become fish? If so, why should salmon be from 1s 6d. to 2s. per pound? The salmon seeks shallow water because nature teaches her that shallow waters are the best for hatching her eggs. The salmon-leaps are one kind of difficulty she meets. These we help her over by means of ladders, or an arrangement of alternate stages. The fish soon find out the water staircase, and flock to the spot, in preference to attempting the passage elsewhere. Again, we have to provide against accidents at the time of spawning, perhaps a flood on the one hand, which would wash the eggs away, or a drought on the other, which would be equally destructive. Again, the fish will eat their own eggs. Trout and salmon do so. Five hundred eggs have been found in the maw of a trout, and afterwards hatched. Among insects, we may count as enemies water-shrimps, the larva of the dragon fly and of the May fly. Some birds, the water-ousel and the dabchick, had been accused of robbery of the spawn, but the lecturer had proved them innocent. They came to feed on the insects, and, so far from being destroyed, should therefore rather be preserved. A bird that did a vast deal of mischief in the way of devouring spawn was the swan. He was a great poacher. The common house-rat, too, would get at the spawn and eat it. And then there were the human poachers, who would catch the parent fish, and send the "old soldiers," i. e., the spent, scabby, diseased fish to

France, where they found a ready market. When a salmon had gone through all these perils, to the age of fourteen months, it went to sea, and there on the margin of the salt water it met with a fresh host of voracious enemies, of whom the most destructive was the angler fish. He feared there was no safeguard against these depredations. But we might materially increase the number of those that left the river by guarding against the former causes of loss, by hatching the spawn themselves, by the removal of nets and other obstructions which hindered the ascent of the fish, and by seeing that the water was not unnecessarily poisoned by the refuse from manufactories. For the first purpose the only plan was to make an artificial nest either out of doors or indoors. All that was required was a common box for out-door hatching, or for indoors an earthenware basin fitted with a series of glass tubes, or a series of zinc boxes, a slight layer of gravel that had been boiled to free it from the insects that might otherwise hurt the spawn, a shallow stream, and a continuous current. The temperature of the water should be from 40° to 45°; and when the spawn was in it must be let alone. There was a great art in letting things alone; and if the spawn was not let alone it was sure to die. Thirty to thirty-five days were sufficient to develop the eggs, and the fish broke through the eggs with very large eyes to enable them to see their enemies and keep out of their way, with no mouths when they first emerged, but with a large umbilical sack or bag attached to their bodies, which contained the albumen of the egg, and which was gradually absorbed into the body of the fish, until it grew big enough to have a mouth to feed itself. This would be in eight or ten days. They had all heard of Mr. Youle's efforts to introduce salmon into Australia, and in the course of the experiments on the best way of preserving fish spawn they had kept the eggs on a block of ice for ninety days, and the eggs were still alive. Another batch had been thus kept for fifty-nine days, and were still as good and as much alive as on the day the fish laid them in the water. It was a most important discovery in what he might justly call the science of artificial incubation, for it showed that by taking such precautions the salmon-spawn might be transmitted to Australia safely, and they meant to do it. For comparatively shorter distances—as in the case of some spawn of grayling and some trout he had received that very evening from France and Switzerland—it was only necessary to put the fresh spawn in bottles, and carefully pack the bottles in boxes of damp moss. For the rest, to hatch them, all that was wanted was a box of cleaned gravel, an equal temperature, and a stream of running water from an inch to an inch and a half deep. As to the mode of treatment of the newly-hatched fish, they might first be kept in a pond and fed with liver. They will eat almost anything. In France the system of hatching fish-spawn had been carried on most extensively by the Government, and with enormously beneficial results. They had there hatched no less than 6,000,000 eggs, and re-stocked thousands of acres of their rivers. The Thames Angling Preservation Society wished to stock the Thames, and had placed boxes at Hampton, and Mr. Ponder, who had been one of the first to lead the way in this admirable scheme, had this year turned out into the Thames many thousand salmon. Some people said that they would never get these fish back. That might be true or not, and he hoped not, but at all events it was worth trying; and it, at least,

was certain that they would never get them back if they did not first put them in. They could put the young fish into the river at the rate of four for a penny, and Mr. Ponder would altogether turn nearly 70,000 fish of different kinds into the Thames this year. Looking at it only with a view to money profit, this system of artificial hatching would prove largely remunerative to lake and river owners. The annual value of the salmon imported from Ireland was no less than £330,000, and from Scotland as much as £500,000. All England only produced salmon to the value of £30,000 a year, and Yorkshire was so poor in this noble fish that he was told all the rivers in that large county only furnished to the value of £128 per annum. It was therefore no mere scientific plaything that was proposed to the owners of these fisheries, but a source of money value to them, which he was sure they would be only too glad to avail themselves of when the immense advantages of the system were pointed out to them. During the course of the lecture, the progress of the fish in its various stages of development in the egg up to an age of four or five days was most fully illustrated by means of a microscope and the electric light, which threw the image of the objects magnified on a white canvas screen suspended for the purpose. Some of these illustrations were exceedingly interesting, every movement in the ova being distinctly visible; and, in the case of the young fish, its rapid breathing, and even circulation of the blood over the umbilical sac and downwards towards the tail, could be detected. The activity of these formidable young monsters—for so they appeared when magnified—on their approaching or touching each other, created a great deal of amusement, and added not a little to the difficulty of keeping them in the field of view at all.—*London Medical Times and Gazette.*

INCONTINENCE OF URINE.—Mr. Robert Johns communicated to the Surgical Society of Ireland (April 10, 1863) the following cases of incontinence of urine, which are particularly interesting from the causes producing the affection, and from the novel and successful treatment:

Case I.—Some years since, a medical friend sought my assistance under the following circumstances:—Mrs. B. sent for him, and stated that she should be obliged to get rid of her housemaid, whom she highly prized, unless he could cure her of an infirmity from which she had been suffering for upwards of a year, which was not only highly detrimental to her property, but most distressing to the girl herself. She was a strong, robust, healthy country girl, aged 25 years, of a plethoric habit, and was unable to retain her urine at night, which commenced to flow off involuntarily as soon as she became warm in bed, and continued to do so incessantly until she rose in the morning. My friend employed assiduously for two months every known treatment, but without the least benefit to his patient. He could not assign any cause for her malady, none of those laid down by writers having existed. However, on inquiring more particularly from herself, I discovered that about fourteen months previously she had had a bad fever, during which, on several occasions, her urine was retained, and on each was passed off by means of warm fomentations, but that the retention had eventuated in her then present complaint. I then recommended that a metallic catheter should be introduced each night into the bladder, and there retained for a quarter of an hour. At the experi-

ration of a week from my visit, the doctor informed me that his patient was quite well, the catheterism having removed the incontinence, some benefit having resulted to her after the first introduction of the instrument.

Case II.—During the winter of 1861, Mrs. B., aged 30 years, of a strumous diathesis, called upon me, and stated that she could not retain her water for a minute, but that she was always worse at night, when she became warm in bed. She was the mother of one child (a male), which was still-born after a very tedious labor, requiring the use of destructive instruments for its completion. About the fourth day after the birth of her child her water began to pass off involuntarily, and had continued to do so for some years, but that about six months before her visit to me she had been cured of a very bad vesico-vaginal fistula (after six plastic operations) which had originated the incontinence. Having found on examination per vaginam and by the catheter, that the urethra and neck of the bladder were rough and highly irritable, every second day for three weeks I passed a metallic instrument into the bladder, and retained it there on each occasion for from ten to fifteen minutes, at the same time giving her each night a pill containing half a grain of extract of belladonna and four grains of dried soda. Under this treatment her distressing complaint was removed, and at the termination of the period just stated she was able to retain her urine as well as she ever did at any time of her life.—*American Jour. of Med. Sciences from Dublin Med. Press.*

THE LYING-IN HOSPITAL OF ROME, *San Rocco*, is connected with the Foundling Hospital, and consists of one great hall and several chambers, one of which is appropriated to births. It was originally established in 1500, with fifty beds, partly for medical and partly for surgical cases; it was, however, changed from its original destination and converted to its present purpose by Clement XIV. in 1790. It has at present from thirty to forty beds, each bed having a curtain and screen, so that the occupants are not seen by the others. All who apply are received without any questions being asked; some with their faces covered with veils, which they are not required to remove. On the register they are only known as guests at a hotel, by their number. No one is allowed, unless by special permit, to enter the hospital, except the physicians, nurses and attendants. Many are received at a considerable period before their confinement, so that their condition may not be suspected by their friends. If able to pay a small sum, they have superior accommodations; and when they are well enough to leave the institution they pass out by a passage in the rear, through an unfrequented street, and thus escape all danger of detection. If they wish to reclaim their children at some future time, some distinguishing mark is put upon them. But the children generally are sent to San Spirito. Usually patients are received only a few days previous to delivery, and they remain, on an average, about one week after confinement. It is supported partly by its own revenues and partly by the State, like the other public institutions of Rome.—Prof. CHARLES A. LEE in *American Medical Times*.

THE OLDEST MARRIED COUPLE IN THE WORLD.—There are living at Marulan, in this colony, says the *Sydney Empire*, two persons, husband

and wife, aged 111 and 107 years. The former has entered upon his 112th year, and the latter upon her 108th. They are extremely feeble and bedridden, but are in possession both of sight and hearing. They were able to move about until lately, and formerly were extremely active in their habits.—*Medical Record of Australia.*

LARGE FEES.—"Mr. Thompson, the surgeon who recently performed an operation on the King of the Belgians, has," says the *Journal de Bruxelles*, "received a fee of 100,000 francs and the Cross of Commander of the Order of Leopold." Prof. Scanzoni has also just received the sum of 30,000 francs for his attendance upon the Empress of Russia during her confinement.

DR. SNOW, of Providence, in his last monthly report, states that there were 89 deaths in that city in July, which number was 32 more than in the month preceding; 28 more than in July, 1862, and 7 more than the average for July during the last seven years.

WE would call the attention of our readers to the advertisement in our advertising pages of the Boylston Prize Questions for the next two years. We hear that the successful essay of the present year, by Dr. Damon, is one of very great merit; we shall look for its publication with much interest.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, AUGUST 16th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	75	66	141
Ave. mortality of corresponding weeks for ten years, 1853-1863,	56.9	50.3	107.3
Average corrected to increased population	00	00	118.4
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar.Fev.	Pneumon.	Variola.	Dysentery.	Typ.Fever.	Chol.Infam.
14	2	3	2	0	2	3	46

NOTICE.—Part 47 of Braithwaite's Retrospect was mailed from this office on the 18th inst. to the members of the Massachusetts Medical Society who have paid their assessment for the year 1863. Members who have paid and do not find the book at their post offices, are requested to forward their vouchers to the Librarian, care of David Clapp, Medical and Surgical Journal office, 334 Washington St., Boston.

DIED.—In this city, 15th inst., David Roberts, M.D., aged 36 years.—At New Orleans, August 5th, of typhoid fever, Dr. W. Wainwright, Surgeon U.S.A.

DEATHS IN BOSTON for the week ending Saturday noon, Aug. 15th, 141. Males, 75—Females, 66.—Accident, 6—apoplexy, 2—disease of the bowels, 1—inflammation of the bowels, 5—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 1—burns, 1—cancer, 1—cholera infantum, 46—cholera morbus, 2—consumption, 14—convulsions, 4—croup, 2—cyanosis, 1—debility, 2—diabetes, 1—diarrhoea, 4—diphtheria, 2—dropsy, 3—dropsy of the brain, 3—dysentery, 2—exhaustion, 1—scarlet fever, 2—typhoid fever, 3—infantile disease, 5—inflammation of the lungs, 2—marasmus, 8—paralysis, 3—peritonitis, 1—sunstroke, 1—thrush, 1—unknown, 7.

Under 5 years of age, 87—between 5 and 20 years, 11—between 20 and 40 years, 21—between 40 and 60 years, 13—above 60 years, 9. Born in the United States, 118—Ireland, 19—other places, 4.